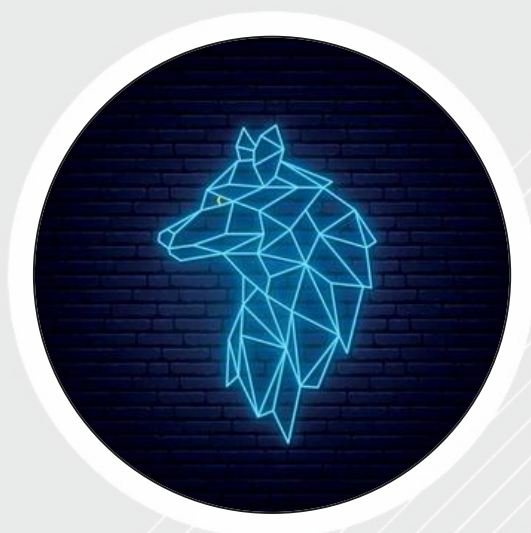




SPYWOLF

Security Audit Report



Completed on
January 21, 2023

@SPYWOLFNETWORK



@SPYWOLFNETWORK



SPYWOLF.CO





OVERVIEW

This audit has been prepared for **Howl Finance** to review the main aspects of the project to help investors make an informative decision during their research process.

You will find a summarized review of the following key points:

- ✓ Contract's source code
- ✓ Owners' wallets
- ✓ Tokenomics
- ✓ Team transparency and goals
- ✓ Website's age, code, security and UX
- ✓ Whitepaper and roadmap
- ✓ Social media & online presence

“

The results of this audit are purely based on the team's evaluation and does not guarantee nor reflect the projects outcome and goal

- SPYWOLF Team -

”





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HOWL FINANCE



PROJECT DESCRIPTION

According to their whitepaper:

\$WOLF brings utility in many forms. Including sustainability, passive income, trust, honesty, NFTs, SaaS and financial freedom! With an ecosystem which provides a great way to gain during any market conditions, we are here through thick and thin.

Utilities list:

- Wolf Swap
- Wolfolio
- SaaS (Software as a Service)
- The Wolf Pack
- The Hunting Grounds

Release Date: Presale starts in January, 2023

Category: Utility token



CONTRACT INFO

Token Name
Howl Finance

Symbol
HOWL

Contract Address
0xD0343DF21e5019769456f211f5baF3cFc0A4597C

Network
Binance Smart Chain

Language
Solidity

Deployment Date
Jan 21, 2023

Verified?
Yes

Total Supply
1,000,000,000

Status
Not launched

TAXES

Buy Tax
none

Sell Tax
none

*Taxes can be changed in future



Our Contract Review Process

The contract review process pays special attention to the following:

- ✓ Testing the smart contracts against both common and uncommon vulnerabilities
- ✓ Assessing the codebase to ensure compliance with current best practices and industry standards.
- ✓ Ensuring contract logic meets the specifications and intentions of the client.
- ✓ Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- ✓ Thorough line-by-line manual review of the entire codebase by industry experts.

Blockchain security tools used:

- OpenZeppelin
- Mythril
- Solidity Compiler
- Hardhat



CURRENT STATS

(As of January 21, 2023)



Liquidity

Not added yet



Burn

No burnt tokens

Status:
Not Launched!

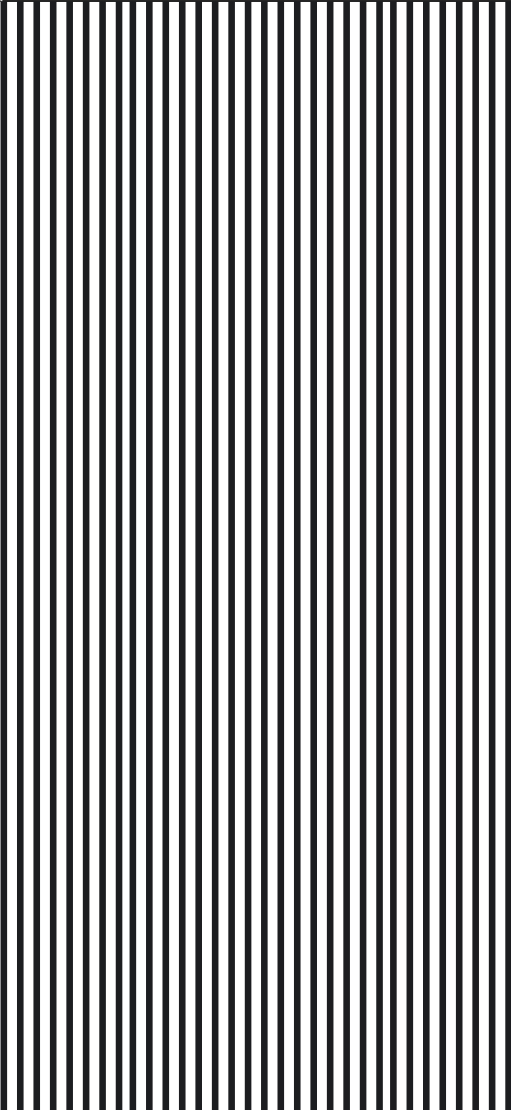
MaxTxAmount
10,000,000

DEX:
PancakeSwap

LP Address(es)



Liquidity not added yet





TOKEN TRANSFERS STATS

Transfer Count	1
Uniq Senders	1
Uniq Receivers	1
Total Amount	1000000000 HOWL
Median Transfer Amount	1000000000 HOWL
Average Transfer Amount	1000000000 HOWL
First transfer date	2023-01-21
Last transfer date	2023-01-21
Days token transferred	1

SMART CONTRACT STATS

Calls Count	3
External calls	3
Internal calls	0
Transactions count	3
Uniq Callers	2
Days contract called	1
Last transaction time	2023-01-21 18:12:25 UTC
Created	2023-01-21 18:07:58 UTC
Create TX	0xdc48cb549b70cbad72f06736bf0a87c1a4db8d216cc3c8119363a947d08a4afa
Creator	0xeeeedba6bfbd03efe1de85988f9db3a1edeafa52



FEATURED WALLETS

Owner address	0xeeeedba6bfbd03efe1de85988f9db3a1edeafa52
Buyback fee receiver	0xeeeedba6bfbd03efe1de85988f9db3a1edeafa52
LP address	Liquidity not added yet

PRESALE STATS (Pinksale)

Total Supply	1,000,000,000 HOWL
Tokens For Presale	N/A
Tokens For Liquidity	N/A
Soft Cap	N/A
Presale Start Time	N/A
Presale End Time	N/A
Listing On	Pancakeswap
Liquidity Percent	N/A
Liquidity Lockup Time	N/A



VULNERABILITY CHECK

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions and reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed



THREAT LEVELS

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Low Risk

Issues on this level are minor details and warning that can remain unfixed.

Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.



FOUND THREATS

High Risk

No high risk-level threats found in this contract.

Medium Risk

No medium risk-level threats found in this contract.

Low Risk

No low risk-level threats found in this contract.



Informational

Owner can set buy/sell fees up to 20% combined.

```
function setFees_base1000(uint256 _liquidityFee, uint256 _marketingFee,
uint256 _buybackFee, uint256 _burnFee) external onlyOwner {
    liquidityFee = _liquidityFee;
    marketingFee = _marketingFee;
    buybackFee = _buybackFee;
    burnFee = _burnFee;
    totalFee = _liquidityFee + _marketingFee + _buybackFee + _burnFee;

    update_fees();
}

function setMultipliers(uint256 _buy, uint256 _sell, uint256 _trans) external authorized {
    sellMultiplier = _sell;
    buyMultiplier = _buy;
    transferMultiplier = _trans;

    update_fees();
}

function update_fees() internal {
    require(totalFee.mul(buyMultiplier).div(100) <= 200, "Buy tax cannot be more than 20%");
    require(totalFee.mul(sellMultiplier).div(100) <= 200, "Sell tax cannot be more than 20%");
    require(totalFee.mul(sellMultiplier + buyMultiplier).div(100) <= 250,
    "Buy+Sell tax cannot be more than 25%");
    require(totalFee.mul(transferMultiplier).div(100) <= 150, "Transfer Tax cannot be more than 15%");

    emit UpdateFee( uint8(totalFee.mul(buyMultiplier).div(100)),
        uint8(totalFee.mul(sellMultiplier).div(100)),
        uint8(totalFee.mul(transferMultiplier).div(100))
        );
}
```



Informational

Owner can exclude address from fees, max transaction limit and max wallet limit.

```
function manage_FeeExempt(address[] calldata addresses, bool status) external authorized {
    require(addresses.length < 501, "GAS Error: max limit is 500 addresses");
    for (uint256 i=0; i < addresses.length; ++i) {
        isFeeExempt[addresses[i]] = status;
        emit Wallet_feeExempt(addresses[i], status);
    }
}

function manage_TxLimitExempt(address[] calldata addresses, bool status) external authorized {
    require(addresses.length < 501, "GAS Error: max limit is 500 addresses");
    for (uint256 i=0; i < addresses.length; ++i) {
        isTxLimitExempt[addresses[i]] = status;
        emit Wallet_txExempt(addresses[i], status);
    }
}

function manage_WalletLimitExempt(address[] calldata addresses, bool status) external authorized {
    require(addresses.length < 501, "GAS Error: max limit is 500 addresses");
    for (uint256 i=0; i < addresses.length; ++i) {
        isWalletLimitExempt[addresses[i]] = status;
        emit Wallet_holdingExempt(addresses[i], status);
    }
}
```

Owner can change max transaction limit but cannot lower it than 0.1% of total supply.

```
function setMaxTxPercent_base10000(uint256 maxTXPercentage_base10000) external onlyOwner {
    require(maxTXPercentage_base10000 >= 10, "Cannot set max transaction less than 0.1%");
    _maxTxAmount = (_totalSupply * maxTXPercentage_base10000) / 10000;
    emit config_MaxTransaction(_maxTxAmount);
}
```



Informational

Owner can withdraw any tokens from the contract except the native token and bnb token.

```
function clearStuckToken(address tokenAddress, uint256 tokens) external authorized returns (bool success) {
    require(tokenAddress != address(this), "Cannot withdraw native token");
    if(tokenAddress == pair){
        require(block.timestamp > launchedAt + 500 days, "Locked for 1 year");
    }

    if(tokens == 0){
        tokens = BEP20(tokenAddress).balanceOf(address(this));
    }

    emit clearToken(tokenAddress, tokens);

    return BEP20(tokenAddress).transfer(msg.sender, tokens);
}
```




Unused functions

The following variables and functions are not usable and can be deleted from the contract:

```
bool public burnEnabled = false;
uint256 public lastSync;

function disableBurns() external onlyOwner {
    burnEnabled = false;
}

function enableBurns() external onlyOwner {
    burnEnabled = true;
}

/*
function LPBurn(uint256 percent_base10000) public authorized returns (bool){
    require(percent_base10000 <= 1000, "May not nuke more than 10% of tokens in LP");
    require(block.timestamp > lastSync + 5 minutes, "Too soon");
    require(burnEnabled,"Burns are disabled");

    uint256 lp_tokens = this.balanceOf(pair);
    uint256 lp_burn = lp_tokens.mul(percent_base10000).div(10_000);

    if (lp_burn > 0){
        _basicTransfer(pair,DEAD,lp_burn);
        pairContract.sync();
        return true;
    }

    return false;
}
*/
```



RECOMMENDATIONS FOR

GOOD PRACTICES

1

Consider fundamental tradeoffs

2

Be attentive to blockchain properties

3

Ensure careful rollouts

4

Keep contracts simple

5

Stay up to date and track development

HOWL FINANCE

GOOD PRACTICES FOUND

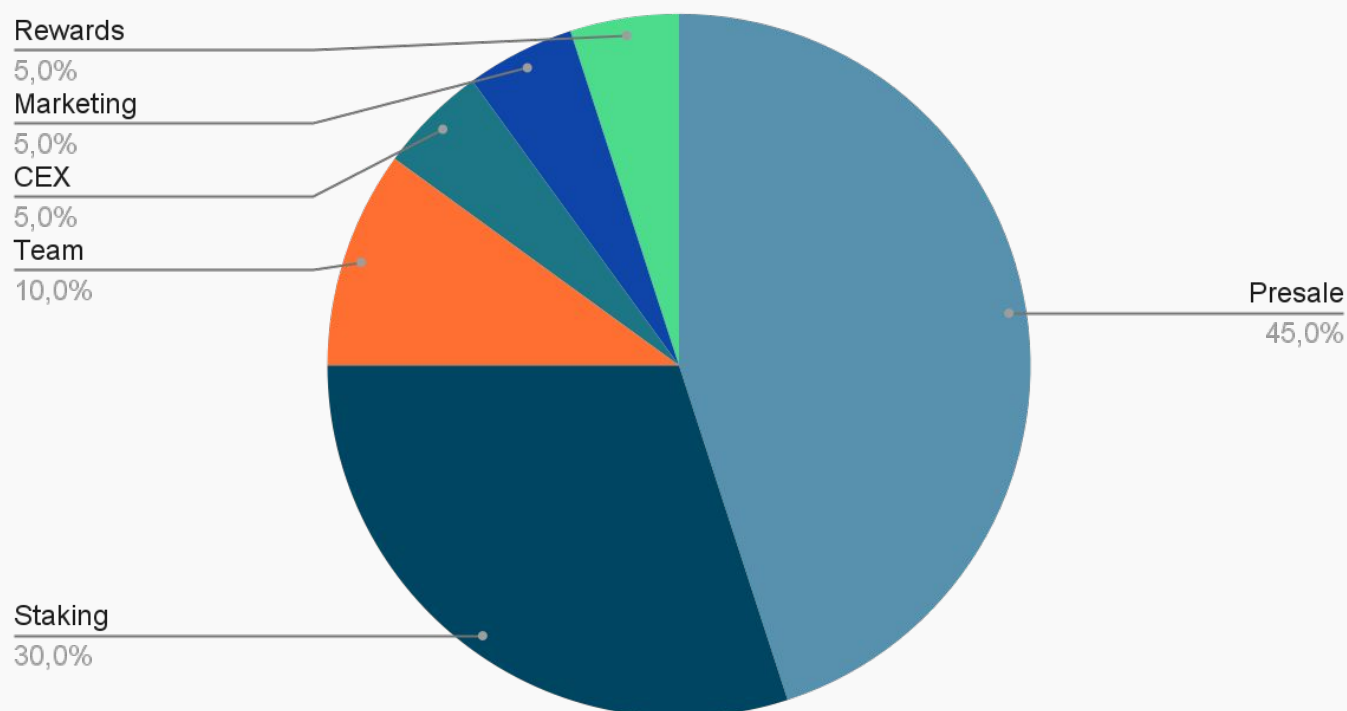
- ✓ The owner cannot mint new tokens after deployment
- ✓ The owner can set a transaction limit, but can't lower it than 0.1% of total supply
- ✓ The smart contract utilizes "SafeMath" to prevent overflows



The following tokenomics are based on the project's whitepaper and/or website:

- 45% - Presale
- 30% - Staking
- 10% - Team (vested)
- 5% - CEX
- 5% - Marketing
- 5% - Rewards

Tokens distribution



TOKENOMICS



THE TEAM

! The team is anonymous

KYC INFORMATION

! No KYC

We recommend the team to get a KYC in order to ensure trust and transparency within the community.





WEBSITE

Website URL

<https://www.howlfinance.com/>

Domain Registry

<https://www.wix.com>

Domain Expiration

2023-12-22

Technical SEO Test

Passed

Security Test

Passed. SSL certificate present

Design

Single page design with nice color scheme and overall layout.

Content

The information helps new investors understand what the product does right away.

No grammar mistakes found..

Whitepaper

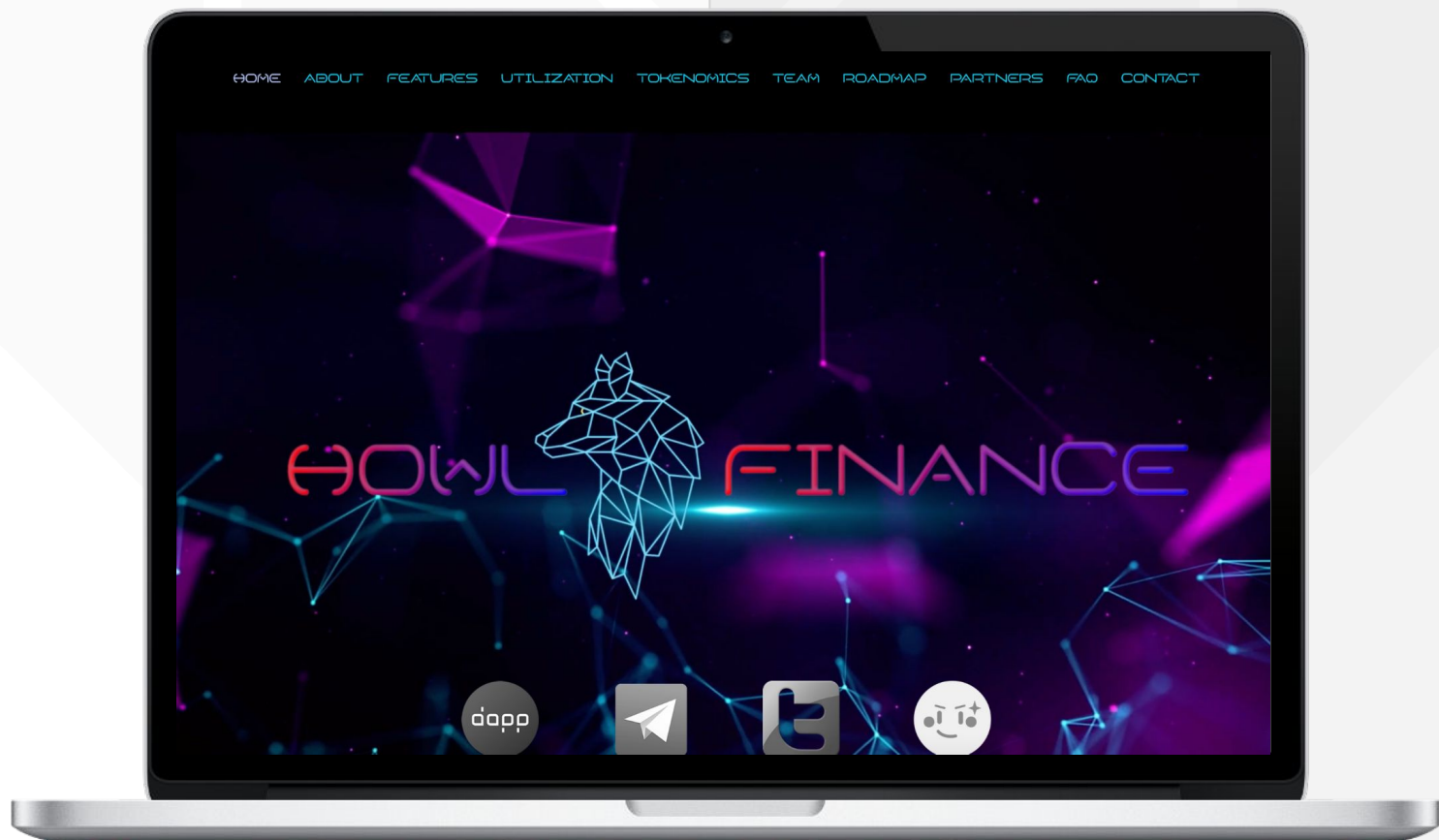
No whitepaper.

Roadmap

Yes, goals set without time frames.

Mobile-friendly?

Yes



howlfinance.com

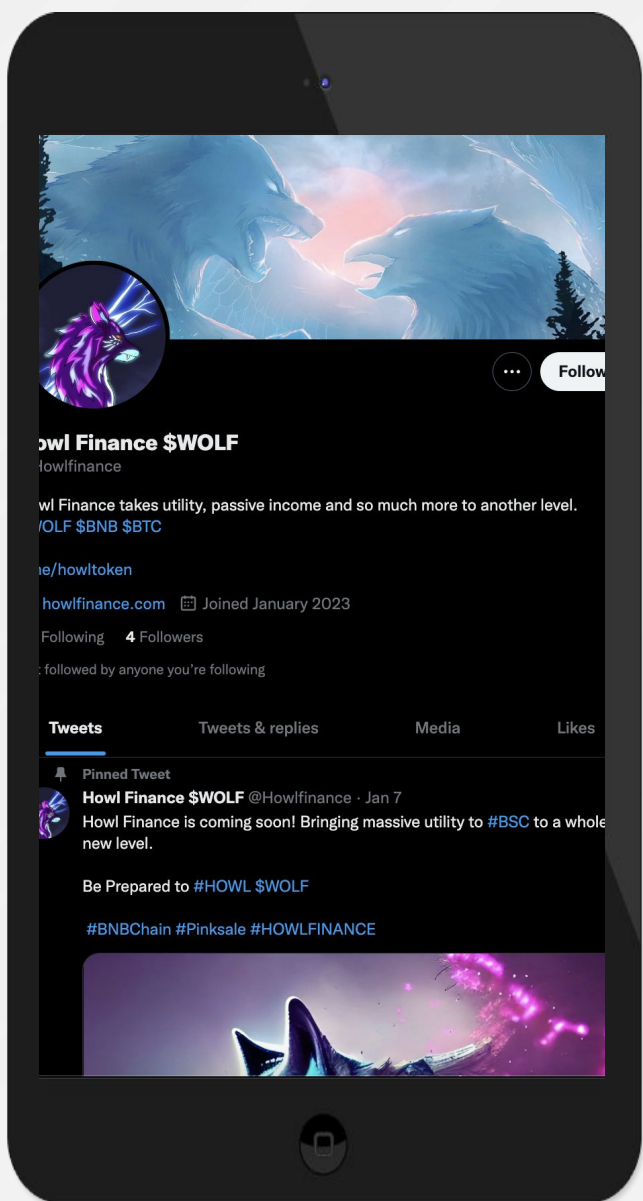
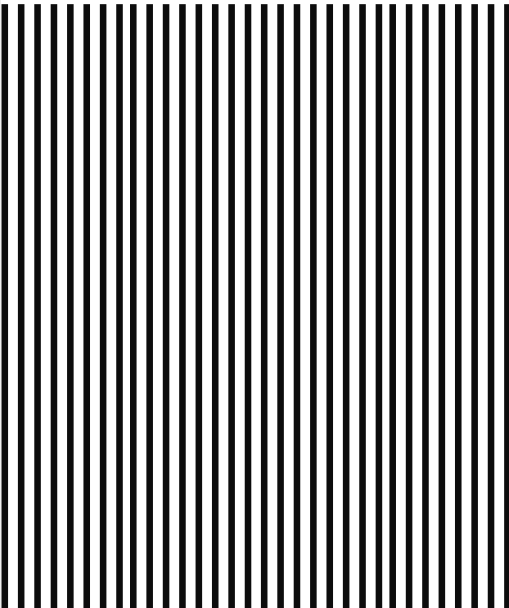


SOCIAL MEDIA & ONLINE PRESENCE



ANALYSIS

Project's social media presence is concentrated in telegram.



Twitter

@Howlfinance

- 29 followers
- 1 post total



Discord

- Not available



Telegram

@HowlToken

- 256 members
- Active members
- Active mods



Medium

- Not available



SPYWOLF

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Contract Development

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Disclaimer

This report shows findings based on our limited project analysis, following good industry practice from the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, overall social media and website presence and team transparency details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report.

While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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No applications were reviewed for security. No product code has been reviewed.